

Lecture 6

Famous Mathematicians

**ENGLISH
FOR
MATHEMATICS**

Itha Priyastiti

Universitas Kristen Wira Wacana

Sumba

REVIEW BEING MATHEMATICS TEACHERS

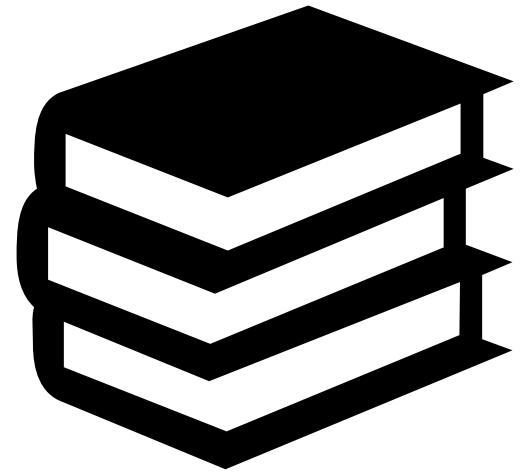
- Being mathematics teachers, you will always be required to give instructions, commands, suggestions, and advice.
- In instructions and commands, you use **imperatives**, which are formed using the base form of the verb (the infinitive* **without “to”**).
- In giving suggestions and advice, you can use modals in English:

- 1) should/ shouldn't
- 2) ought to
- 3) had better/ had better not
- 4) have to
- 5) have got to
- 6) must
- 7) do not have to
- 8) must not
- 9) could



simple/ base
form of a verb

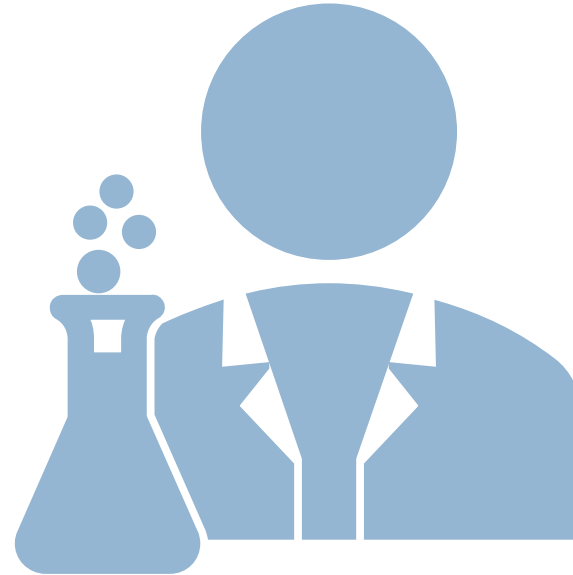
READING



FAMOUS MATHEMATICIANS

an expert in or student of mathematics.

- Do you have any **mathematicians** that you admire?
- Who are famous mathematicians do you know?
- Have you heard of Srinivasa Ramanujan? He is one of mathematicians who made important discoveries.
- Let's read his biography!



BIOGRAPHY

Srinivasa Ramanujan was a famous Indian mathematician who amazed the world with his talent. He was born in 1887 in Tamilnadu, India, and loved math from a young age. Although he had no formal training, he made important discoveries in number theory and other fields. By the time he turned 17, he had already done his own research in mathematics. He had also read a book that changed his life, which led him to focus completely on math. Because of this, he failed his college exams and had to leave school. Later, he sent a letter to a British mathematician named Hardy, who saw Ramanujan's talent and invited him to England. Ramanujan became well-known and received honors, but the weather and food in England made him sick. He returned to India in 1919, but he died a year later at the age of 32.

Source: modified from <https://famous-mathematicians.org/srinivasa-ramanujan>

COMPREHENSION

Now, can you answer the following questions based on the biography?

1. Where was Ramanujan born?
2. Who invited Ramanujan to England?
3. When did Ramanujan go back to India?

READING SKILLS



- Let's discuss how you answer the comprehension questions.
 - How did you answer them?
 - What strategy did you use?
-
- First thing that you should know in answering reading comprehension questions are the questions!
😊
 - Make sure you understand what is being asked.
 - What are the steps?

READING SKILLS

1. Identify the **interrogative word** or **question word**!

What	→	information about things, ideas, or actions
Where	→	information about a place/ location
When	→	information about time
Who	→	information about a person
Why	→	to ask for the reason/ explanation
Which	→	to ask for a choice/ selection among a group of actions
How	→	details about the manner/ method/ process of something
How much/ many	→	quantity/ number of something
auxiliary verbs	→	yes/ no answer

READING SKILLS

2. Find the keywords in from the questions.

Where was Ramanujan **born**?

keyword



3. Find the keywords in the passage.

4. The answer is usually located around the keyword(s).

Challenge 1

- You only have a limited time to answer all the questions!
- Do you have to read the whole passage?
- Do you have to read sentence by sentence? Phrase by phrase?

- No. You can save your time by NOT reading the whole passage/ sentence by sentence/ phrase by phrase
- Have you heard of skimming and scanning?

SKIMMING & SCANNING

Skimming and **scanning** are two *reading techniques* that help readers find information quickly and efficiently — especially useful for students when reading longer texts or in short durations.

skimming

- **Purpose:**
To get the general idea or the *main points* of a text.
- **How:**
Read **quickly**, focusing on headings, first sentences, keywords, and summaries.
- **Used when:**
1) You want to understand the overall topic or
2) You're deciding if the text is worth reading in detail.
- **Example:**
When you open a long article about Ramanujan and want to know what it's generally about, you skim the introduction and subheadings.

scanning

- **Purpose:**
To find *specific information* (facts, numbers, names, dates).
- **How:**
Move your eyes **quickly** over the text looking for a keyword or phrase.
- **Used when:**
1) You're answering a question or 2) You're looking for a definition, date, or name.
- **Example:**
When you want to know what year Ramanujan died, you scan the text to find the number **1920**.

Challenge 2

- What if I cannot find the keywords in the passage?

5. Find the words/ phrases that have similar meaning

When did Ramanujan go back to India?



keywords

- What's the possible synonym of go back?
- It can be *come back, return, come home*.
- Find one of the synonyms in the passage.

Suggestion

- Use more than one keywords.
- Do not use auxiliary verbs as your keywords.
- They appear frequent and everywhere in the passage! 😊

READING SKILLS

- Let's see again the questions
- See how all the strategies you've learned can be used to answer the questions.
- Remember to comprehend what's being asked by:
 - 1) identifying the question words and keywords; and
 - 2) finding the answer in the passage by scanning!

DISCUSSION

Srinivasa Ramanujan was a famous Indian mathematician who amazed the world with his talent. He was **born** in 1887 in **Tamilnadu, India**, and loved math from a young age. Although he had no formal training, he made important discoveries in number theory and other fields. By the time he turned 17, he had already done his own research in mathematics. He had also read a book that changed his life, which led him to focus completely on math. Because of this, he failed his college exams and had to leave school. Later, he sent a letter to a British mathematician named G. H. Hardy, who saw Ramanujan's talent and invited him to England. Ramanujan became well-known and received honors, but the weather and food in England made him sick. He returned to India in 1919, but he died a year later at the age of 32.

1. **Where** was Ramanujan **born**?

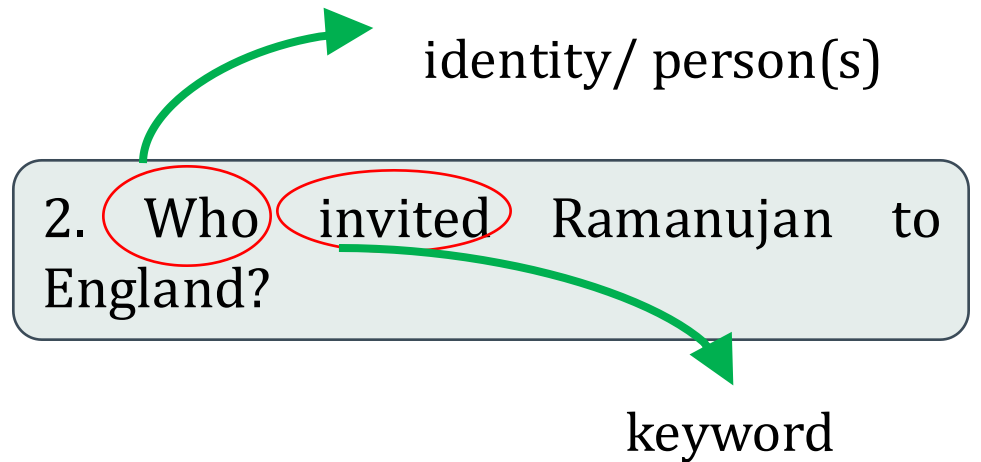
location/ place

keyword

ANSWER:
Tamilnadu, India

DISCUSSION

Srinivasa Ramanujan was a famous Indian mathematician who amazed the world with his talent. He was born in 1887 in Tamilnadu, India, and loved math from a young age. Although he had no formal training, he made important discoveries in number theory and other fields. By the time he turned 17, he had already done his own research in mathematics. He had also read a book that changed his life, which led him to focus completely on math. Because of this, he failed his college exams and had to leave school. Later, he sent a letter to a British mathematician named **G. H. Hardy** who saw Ramanujan's talent and **invited** him to England. Ramanujan became well-known and received honors, but the weather and food in England made him sick. He returned to India in 1919, but he died a year later at the age of 32.



**ANSWER:
G. H. Hardy**

DISCUSSION

Srinivasa Ramanujan was a famous Indian mathematician who amazed the world with his talent. He was born in 1887 in Tamilnadu, India, and loved math from a young age. Although he had no formal training, he made important discoveries in number theory and other fields. By the time he turned 17, he had already done his own research in mathematics. He had also read a book that changed his life, which led him to focus completely on math. Because of this, he failed his college exams and had to leave school. Later, he sent a letter to a British mathematician named G. H. Hardy, who saw Ramanujan's talent and invited him to England. Ramanujan became well-known and received honors, but the weather and food in England made him sick. He returned to India in 1919, but he died a year later at the age of 32.

time

3. When did Ramanujan go back to India?

keywords

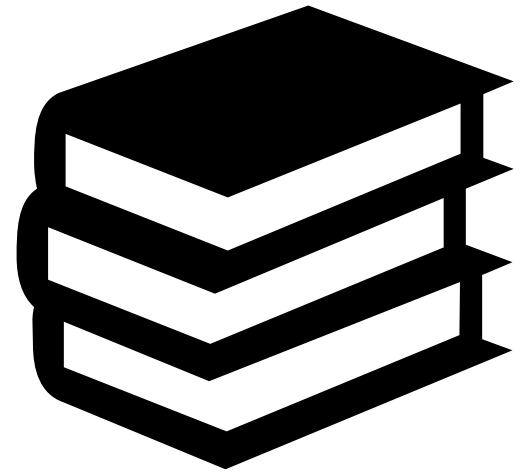
go back = come back, return, come home

**ANSWER:
In 1919**

LANGUAGE FOCUS

- Now, that we have read the biography of Srinivasa Ramanujan, let's talk more about how the biography is written.
- What is a biography? It is an account of someone's life written by someone else.
- When you talk about biography, the events or stories are usually **in the past**.
- What tense is used to talk about **past events**?

SIMPLE PAST TENSE



LANGUAGE FOCUS

- Let's revisit the biography.
- This time, pay attention to the **blue bolded** words.

Srinivasa Ramanujan **was** a famous Indian mathematician who **amazed** the world with his talent. He **was** born in 1887 in Tamilnadu, India, and **loved** math from a young age. Although he **had** no formal training, he **made** important discoveries in number theory and other fields. By the time he **turned** 17, he **had** already **done** his own research in mathematics. He also **had read** a book that **changed** his life, which **led** him to focus completely on math. Because of this, he **failed** his college exams and **had** to leave school. Later, he **sent** a letter to a British mathematician named Hardy, who **saw** Ramanujan's talent and **invited** him to England. Ramanujan **became** well-known and **received** honors, but the weather and food in England **made** him sick. He **returned** to India in 1919, but he **died** a year later at the age of 32.

Source: modified from <https://famous-mathematicians.org/srinivasa-ramanujan>

WHAT IS SIMPLE PAST

- Use the simple past tense when you say **when** something happened, so it is associated with **certain past time expressions, e.g.**

He **was** born in 1887 in Tamilnadu, India, and **loved** math from a young age.

- Simple past uses past verb (V2).
- Past verbs can be regular and irregular.

VERBS IN SIMPLE PAST (POSITIVES)

1. Regular verbs

To form a regular verb in the past simple, “-ed” is added to the base form.

V1 (the base form of verb) + **ed**

SUBJECT	PAST VERB	REST OF SENTENCE
I/ You/ We/ They/ Rambu and Umbu/He/ She/ It/ Rambu	started	the project last week.

2. Irregular verbs

Some verbs do not take “-ed” to form the past simple. There are no specific rules about how to form irregular verbs in the past simple.

taught is the past verb of teach

SUBJECT	PAST VERB	REST OF SENTENCE
I/ You/ We/ They/ Rambu and Umbu/He/ She/ It/ Rambu	taught	Calculus last semester.

VERBS IN SIMPLE PAST

Other examples of irregular verbs in the past simple:

have

be

say

do

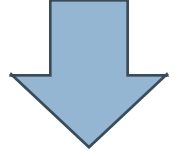
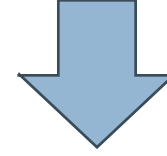
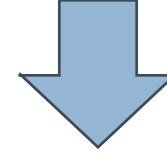
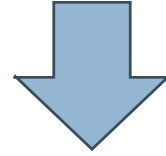
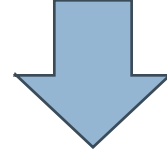
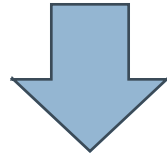
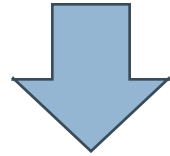
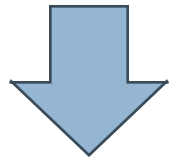
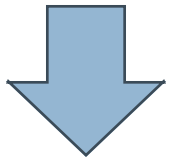
give

come

make

buy

go



had

was/were

said

did

gave

came

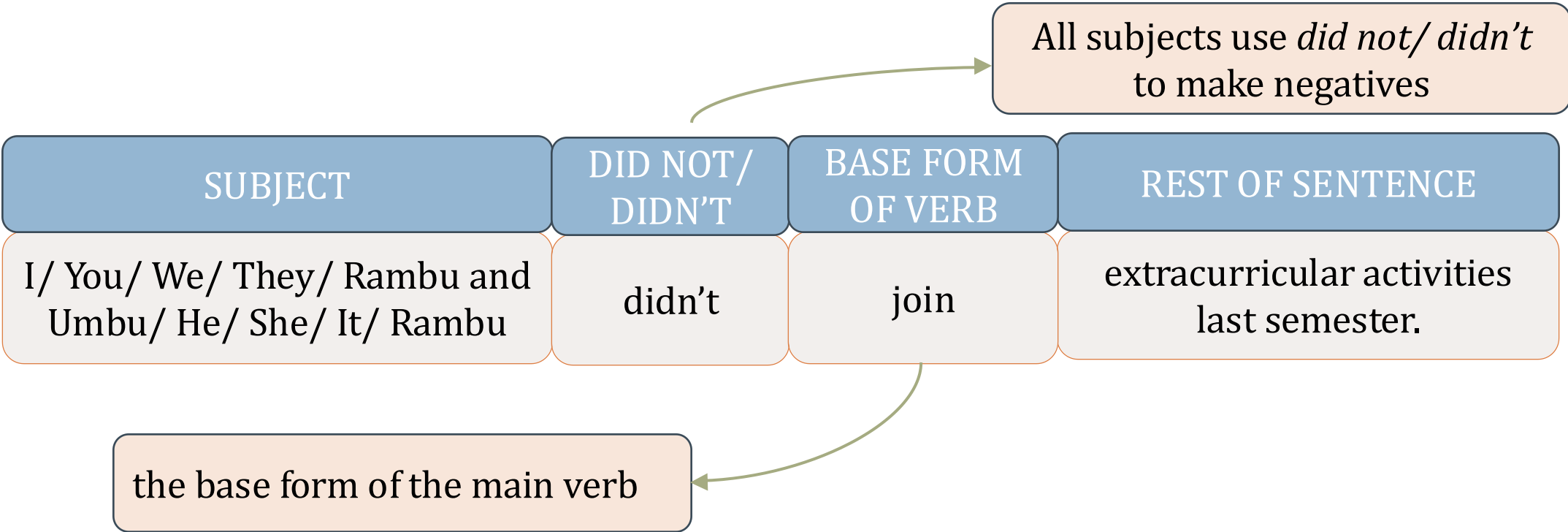
made

bought

went

VERBS IN SIMPLE PAST (NEGATIVES)

- The past simple negative uses “did not” or “didn’t” with the base form of the main verb. The main verb is not put into the past simple.



COMMON MISTAKES

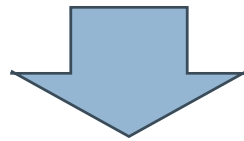


- When using the negative form of the past simple, “*didn’t*” plus the main verb in the base form is used.
- Keep in mind that the main verb is never in the past simple.
- See the following example of the common mistakes:



Some students *didn’t* *passed* the exam.

The main verb should only go into the past simple if it’s a positive statement.



Some students *didn’t* *pass* the exam.

“*pass*” should be in the base form

BE IN SIMPLE PAST

- Remember the use of “*be*”?
- When you want to describe a state of being in the past, use “*be*” in simple past.
- The past simple of “*be*” is completely irregular. It is the only verb in the past simple which changes depending on the subject.

SUBJECT	BE	NEGATIVE BE	REST OF SENTENCE
I/ He/ She/ It/ Umbu	was	was not (wasn't)	late to class.
You/ We/ They/ Rambu and Umbu	were	Were not (weren't)	

- Example from the text:
Srinivasa Ramanujan **was** a famous Indian mathematician.

QUESTIONS IN SIMPLE PAST

- Questions in the past simple are formed using “did.” For past simple questions with “be,” the subject and the verb “was” or “were” are swapped around.

Place “*did*” at the beginning to make *Yes/ No* questions.

INTERROGATIVE	DID	SUBJECT	BASE FORM OF VERB	REST OF SENTENCE
	Did	I/ You/ We/ They/ Rambu and Umbu/ He/ She/ It/ Rambu	join	extracurricular activities last semester?

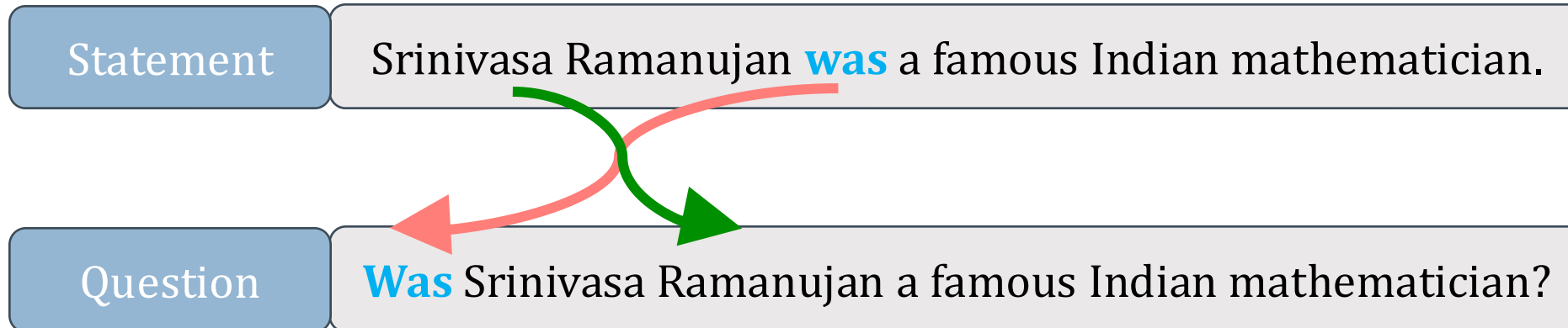
- Add interrogative to make open questions.
- Interrogatives: what/ where/ when/ who/ why/ which/ how

QUESTIONS WITH BE

- To make a question using the verb “be” in the past simple, **swap** the order of the subject and “was” or “were.”

BE	SUBJECT	REST OF SENTENCE
was	I/ He/ She/ It/ Umbu	late to class?
were	You/ We/ They/ Rambu and Umbu	

- Example:



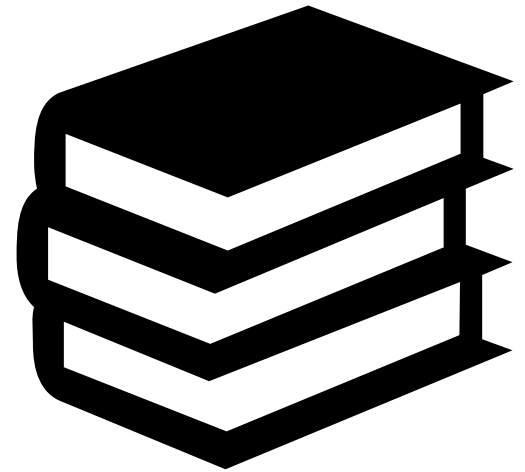
LANGUAGE FOCUS

- Let's revisit the biography.
- This time, pay attention to the **pink bolded** words.

Srinivasa Ramanujan **was** a famous Indian mathematician who **amazed** the world with his talent. He **was** born in 1887 in Tamilnadu, India, and **loved** math from a young age. Although he **had** no formal training, he **made** important discoveries in number theory and other fields. By the time he **turned** 17, he **had** already **done** his own research in mathematics. He also **had read** a book that **changed** his life, which **led** him to focus completely on math. Because of this, he **failed** his college exams and **had** to leave school. Later, he **sent** a letter to a British mathematician named Hardy, who **saw** Ramanujan's talent and **invited** him to England. Ramanujan **became** well-known and **received** honors, but the weather and food in England **made** him sick. He **returned** to India in 1919, but he **died** a year later at the age of 32.

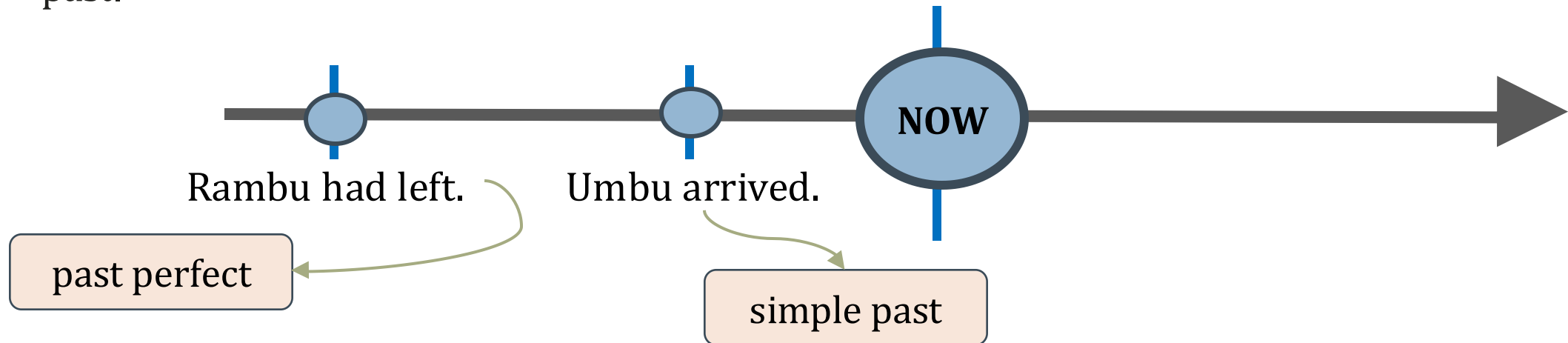
Source: modified from <https://famous-mathematicians.org/srinivasa-ramanujan>

PAST PERFECT TENSE



WHAT IS PAST PERFECT TENSE

- **The past perfect expresses** *an activity that was complete before another activity or time in the past* (Azar, 2009)
- In English, past perfect is usually used with the past simple to talk about two or more events that happened at different times in the past.
- The past perfect is used to talk about an action that took place **before** another moment in the past.

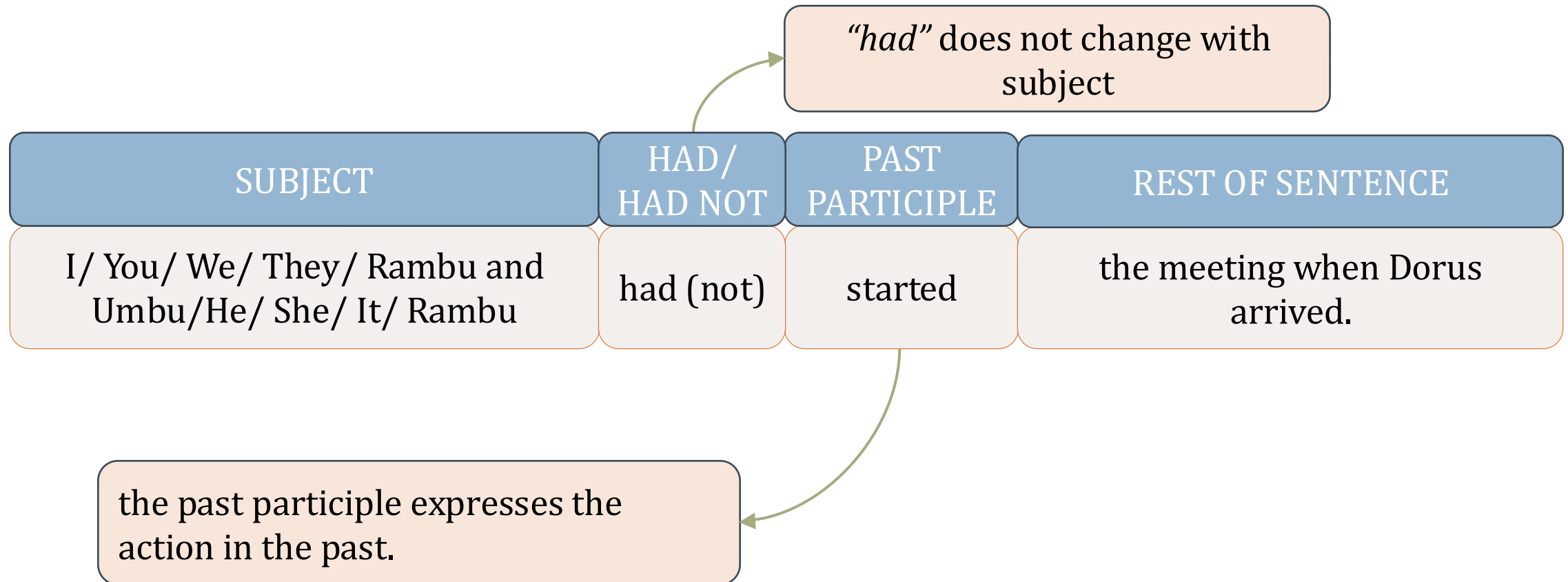


- Example from the text:

By the time he **turned** 17, he **had** already **done** his own research in mathematics.

HOW TO FORM

- Use “had” followed by the past participle (V3) to form the past perfect.



PAST PARTICIPLES

Examples of irregular past participles:

have

be

say

do

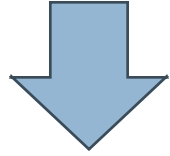
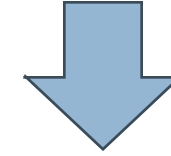
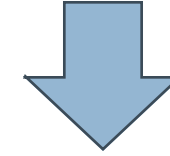
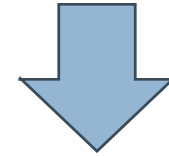
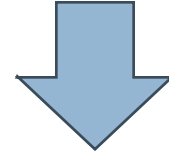
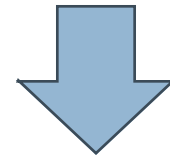
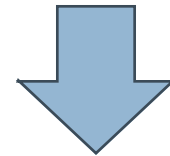
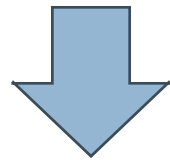
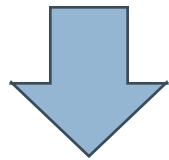
give

come

make

buy

go



had

been

said

done

given

come

made

bought

gone

COMMON MISTAKES

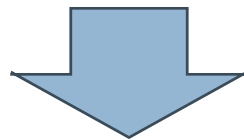


- It is important not to mix up past simple forms with past participles (Hall & Barduhn, 2016)



The seminar **had** **began** when I arrived

This is the past simple form of “*begin*,” and shouldn’t be used in perfect tenses.



The seminar **had** **begun** when I arrived.

This is the past participle of “*begin*.”

BE IN PAST PERFECT

- Past perfect tense uses “*been*”.

SUBJECT	HAD/ HAD NOT	BEEEN	REST OF SENTENCE
I/ He/ She/ It/ Umbu/ You/ We/ They/ Rambu and Umbu	had (not)	been	late to class.

- Example:
Jo **had been** a teacher before he became a businessman.

EXERCISES

Use the simple past or the past perfect form of the verbs in parentheses to complete the sentences. In some cases, either tense is correct. Example:

Question: I was late. When I (arrive) _____, the teacher (start) _____ the class.

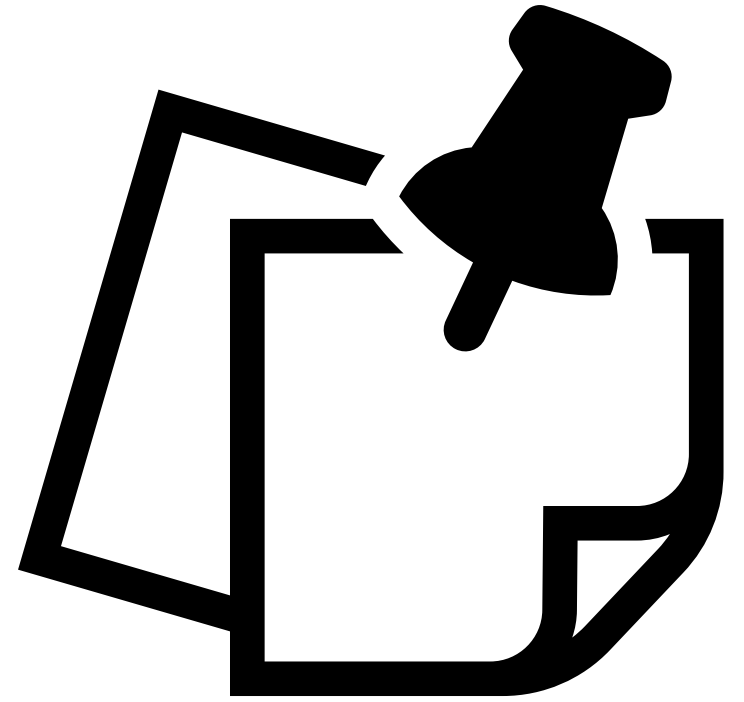
Answer. : I was late. When I **arrived** the teacher **had started** the class.

1. I (*not finish*) _____ the assignment when suddenly the power (*be*) _____ out.
2. It was raining hard, but by the time class (*be*) _____ over, the rain (*stop*) _____.
3. Some prospective students (*register*) _____ even before the admission period (*begin*) _____.
4. The registrar (not give) _____ some students access to the LMS because they (not complete) _____ the tuition fee.

DISCUSSION

1. I (*not finish*) *had not finished* the assignment when suddenly the power (*be*) *was* out.
2. It was raining hard, but by the time class (*be*) *was* over, the rain (*stop*) *had stopped*.
3. Some prospective students (*register*) *had registered* even before the admission period (*begin*) *began*.
4. The registrar (*not give*) *did not give* some students access to the LMS because they (*not complete*) *had not completed* the tuition fee.

TAKE HOME NOTES



SIMPLE PAST AND PAST PERFECT TENSE

Simple Past & Past Perfect

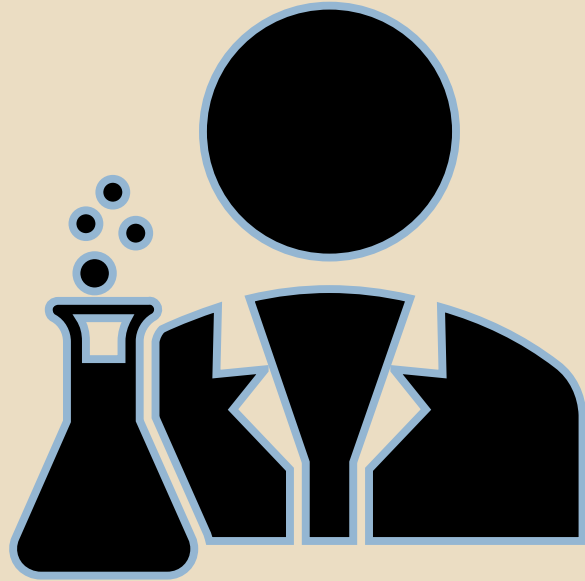
- Terdapat dua kejadian yang **sudah terjadi**.
- Kejadian pertama **sudah selesai** (menggunakan Past Perfect), kemudian **disusul** oleh kejadian kedua (menggunakan Simple Past).

REFERENCES

Azar, B. S. (2003). *Fundamentals of English Grammar* (3rd ed.). Pearson Education.

Hall, D. and Barduhn, S. (2016). *English for Everyone*. Edited by J. Siklos and A. Singer. New York: DK Publishing.

Srinivasa Ramanujan. (2013). Famous Mathematicians. <https://famous-mathematicians.org/srinivasa-ramanujan/>



Thanks, and see you in the
next lecture!